PhytoKeys 170: 39–43 (2020)
doi: 10.3897/phytokeys.170.59775
https://phytokeys.pensoft.net

SHORT COMMUNICATION

A peer-reviewed open-access journal
PhytoKeys
Launched to accelerate biodiversity research

Typification of *Juniperus pingii* W.C.Cheng (Cupressaceae)

Yong Yang[1], Jean Hoch[2]

1 *College of Biology and Environment, Nanjing Forestry University, 159 Longpan Road, Nanjing 210037, Jiangsu, China* **2** *Domaine de Bonnefontaine, 67260 ALTWILLER, France*

Corresponding author: Yong Yang (yangyong@njfu.edu.cn)

Academic editor: D. Stevenson | Received 18 October 2020 | Accepted 23 November 2020 | Published 10 December 2020

Citation: Yang Y, Hoch J (2020) Typification of *Juniperus pingii* W.C.Cheng (Cupressaceae). PhytoKeys 170: 39–43. https://doi.org/10.3897/phytokeys.170.59775

Abstract

W.C.Cheng validly published the name *Juniperus pingii* W.C.Cheng in 1944 by providing a validating Latin diagnosis in de Ferré (1944), but he failed to cite any specimen. He repeated the publication of the name in 1947 with the same Latin diagnosis; he thus published an isonym "*J. pingii*" under Art. 6 Note 2. Cheng (1947) lectotypified the name *J. pingii* when he designated *W.C.Cheng 1015* as the "type" of the isonym. Farjon (2005) overlooked this early designation and his lectotypification of the name with the illustration from the 1944 protologue is not effective as the *W.C.Cheng 1015* specimen is extant.

Keywords

China, conifer, Cupressaceae, *Juniperus pingii*, typification

Introduction

Cheng (1939) did not validly publish the name "*Juniperus pingii*" because he did not provide a Latin diagnosis for the species. The name was validly published in an article by de Ferré (1944) in which a species diagnosis was provided including a simple figure and a short paragraph of Latin diagnosis in the footnote. Cheng

Copyright *Yong Yang, Jean Hoch.* This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

(1947) apparently was not aware of the valid publication of the species name in 1944 and, in 1947, repeated the publication of this species as a "sp. nov." by providing a Latin diagnosis. We made a comparison between the two publications and found that the diagnosis of 1947 is completely identical to that of 1944. Obviously, the Latin diagnosis in both publications was provided by W.C.Cheng. De Ferré (1944) also ascribed the diagnosis to W.C.Cheng when she wrote "Voici sa diagnose latine telle qu'elle est contenue dans l'ouvrage inédit de W.C.Cheng" (Here is his Latin diagnosis as it is contained in the unpublished work of W.C.Cheng); de Ferré also wrote "*J. Pingii* Cheng sp. nov.". As a result, the name is to be attributed to Cheng alone and correct citation of the species name is *Juniperus pingii* W.C.Cheng. The two publications are different with respect to type designation: no specimen was cited in the 1944 publication, but Cheng cited two collections in 1947 and designated *W.C.Cheng 1015* [China. Sichuan, Jiulong Xian ("Sikang, south of Chui-lung-hsien"), alt. 2800-3400 m] as the type. Cheng (1947) also cited *W.C.Cheng 939* from the same locality as a paratype. *Juniperus pingii* W.C.Cheng was validly published in 1944. "*Juniperus pingii* W.C.Cheng (1947)" is simply a later isonym (Art. 6 Note 2, Turland et al. 2018) of the original *J. pingii* and Cheng (1947) must be considered to have lectotypified *J. pingii* W.C.Cheng (de Ferré 1944). In *Flora Reipublicae Popularis Sinicae*, W.C.Cheng & W.T.Wang made a new combination [*Sabina pingii* (Cheng) W.C.Cheng & W.T.Wang, as "*Sabina pingii* (Cheng ex Ferré) W.C.Cheng & W.T.Wang"] based on *Juniperus pingii* Cheng [as "*Juniperus pingii* Cheng ex Ferré"] and indicated that the type was collected from Jiulong Xian of Sichuan of China (Wang et al. 1978), suggesting that W.C.Cheng accepted *W.C.Cheng 1015* from Jiulong Xian as the type of the name.

Both the figure provided in 1944 and the specimens cited in 1947 should be considered as original material studied by W.C.Cheng. Farjon (2005, 2010) overlooked the isonym of Cheng (1947) and, thus, had no idea of the lectotypification of the name. Farjon (2005) lectotypified the name with the illustration in de Ferré (1944), which should be accepted, provided the lecotype designated by W.C.Cheng (*W.C.Cheng 1015*) is lost. However, this is not the case. Cheng (1947) did not indicate the herbarium/institution for the lectotype in his designation. W.C.Cheng had worked in Nanjing until he moved to Beijing in 1962 and most of his specimens were moved to the Herbarium (PE) and were digitised and available online. We did not find *W.C.Cheng 1015* in either CVH (Chinese Virtual Herbarium, http://www.cvh.ac.cn/) or NSII (National Specimen Information Infrastructure, http://www.nsii.org.cn/2017/query.php). W.C.Cheng studied in France and worked with H.M. Gaussen on his Ph.D. thesis "*Les Forets du Se-Tchouan et du Si-Kang Oriental*" (Ma 2011). We finally located the specimen *W.C.Cheng 1015* (TL0008814, Fig. 1) in Université Paul Sabatier Toulouse. This specimen is marked with "Type" and it was clearly studied by W.C.Cheng because it has a label with Cheng's handwriting "*Juniperus pingii* Cheng sp. nov.".

We checked the protologue in de Ferré (1944) and found that the illustration ("figure 21" in de Ferré 1944) contains a female cone and a separate seed, both from the lateral view. This figure is too simple to assist identification; it does not show any of

Juniperus Pingii
W.C.Cheng 1015
Université Paul Sabatier Toulouse
TL0008814
isotype Juniperus pingii W.C.Cheng ex Ferré
Bull. Soc. Hist. Nat. Toulouse 79: 76 1944.
W. C. Cheng 1015, 24-05-1930
China, Sichuan, south of Juilong Xian, alt. 2800-3400 m.
Dédié au Prof. C. Ping, fondateur du: Biological
Laboratory of the Science Society of China.
TL 4945-176 - renseigné par J. Hoch 2017
TYPE
Herbier de Gymnospermes
(Laboratoire Forestier)
Univ. Paul Sabatier, Toulouse
TL110- 4945-176
LABORATOIRE FORESTIER DE TOULOUSE
Juniperus Pingii Cheng sp.nov.
SiKang: South of Chwilung-Hsien
alt: 3-100 m.
W.C.Cheng 1015.
May 24, 1930
TOXIQUE
中國科學社生物研究所植物標本室
HERBARIUM OF BIOLOGICAL LABORATORY
THE SCIENCE SOCIETY OF CHINA, NANKING, CHINA
標本室號數
產 地
採集人 W.C.Cheng 時 期 1930 年 5 月 24 日
號 數 1015 鑑定人 W.C.Cheng
RECOLNAT

Figure 1. Lectotype of *Juniperus pingii* W.C.Cheng: *W.C.Cheng 1015* (TL0008814).

the diagnostic characters as Cheng indicated "this species is closely related to *J. recurva* Buch.-Hamilt., from which it differs chiefly in the shorter leaves with distinctly keeled lower surface". Nevertheless, the actual specimen *W.C.Cheng 1015* possesses diagnostic

characters assisting the identification. As a result, there is no reason to supersede Cheng's lectotypification (*W.C.Cheng 1015*) with Farjon's designation (the illustration "figure 21" in de Ferré 1944).

Typification

***Juniperus pingii* W.C.Cheng in Y. de Ferré, Bull. Soc. Hist. Nat. Toulouse 79: 76, f. 21 (1944)**

≡ *Juniperus pingii* W.C.Cheng, Trav. Lab. Forest. Toulouse V, 1 (2): 93 (1939), *nom. inval.*; *Juniperus pingii* W.C.Cheng, Res. Notes Forest. Inst. Natl. Centr. Univ. Nanking, Dendrol. Ser. 1: 2 (1947), *isonym*; *Sabina pingii* (W.C.Cheng) W.C.Cheng & W.T.Wang, Fl. Reip. Pop. Sin. 7: 355 (1978).

Type. China. Sichuan, Jiulong Xian ("Sikang, south of Chui-lung-hsien"), alt. 2800–3400 m, 24 May 1930, *W.C.Cheng 1015* (lectotype: TL0008814!).

Acknowledgements

We are grateful to Keith Rushforth and the *Cupressus* Conservation Project for their kind help on de Ferré's literature and the type specimen, to John McNeill for valuable suggestions and language editing and to Xiangyun Zhu for useful discussions. We also thank Michael Calonje and an anonymous reviewer for their valuable suggestions. Images of the specimens of *Juniperus pingii* W.C.Cheng were obtained from the Chinese Virtual Herbarium (CVH, http://www.cvh.ac.cn/). This work was supported by the National Natural Science Foundation of China [31970205& 31770211].

References

Cheng WC (1939) Les Forets du Se-tchouan et du Si-kang oriental. Travaux du Laboratoire Forestier de Toulouse 5(1): 1–223.

Cheng WC (1947) New Chinese trees and shrubs. Research Notes, Forestry Institute; National Central University, Nanking. Dendrological Series 1: 1–4.

de Ferré Y (1944) Morphologie des graines de gymnospermes. Extrait du Bulletin de la Société d'Histoire Naturelle de Toulouse 79: 73–80.

Farjon A (2005) A Monograph of Cupressaceae and *Sciadopitys*. Royal Botanical Gardens, Kew.

Farjon A (2010) A Handbook of the World's Conifers. Brill, Leiden-London. https://doi.org/10.1163/9789047430629

Ma JS (2011) The Outline of Taxonomic Literature of Eastern Asian Higher Plants. Higher Education Press, Beijing.

Turland NJ, Wiersema JH, Barrie FR, Greuter W, Hawksworth DL, Herendeen PS, Knapp S, Kusber WH, Li DZ, Marhold K, May TW, McNeill J, Monro AM, Prado J, Price MJ, Smith GF (2018) International Code of Nomenclature for Algae, Fungi and Plants (Shenzhen Code) Adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. Regnum Vegetabile 159. Koeltz Botanical Books, Glashütten. https://doi.org/10.12705/Code.2018

Wang WT, Cheng WC, Fu LK, Chu CD (1978) *Sabina*. In: Cheng WC, Fu LK (Eds) Flora Reipublicae Popularis Sinicae (Vol. 7). Science Press, Beijing, 347–376.